SHINYBOW™ USA

MULTIMEDIA AUDIO AND VISUAL

INSTRUCTION MANUAL

MODEL : SB-8188LCM

8x8 VGA-Audio Matrix Switcher

Multi Video Matrix Switcher

VGA-Audio Matrix Switcher Series

Thank you for purchasing the SB-8188LCM VGA-AUDIO Matrix Switcher. You will find this unit easy to install and highly reliable but it is essential that you read this manual thoroughly before attempting to use this switcher.

SAFETY INFORMATION

1. To ensure the best results from this product, please read this manual and all other documentation before operating your equipment. Retain all documentation for future reference.
2. Follow all instructions printed on unit chassis for proper operation.
3. To reduce the risk of fire, do not spill water or other liquids into or on the unit, or operate the unit while standing in liquid.
4. Make sure power outlets conform to the power requirements listed on the back of the unit. Keep unit protected from rain, water and excessive moisture.
5. Do not attempt to clean the unit with chemical solvents or aerosol cleaners, as this may damage the unit. Dust with a clean dry cloth.
6. Do not use the unit if the electrical power cord is frayed or broken. The power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.
7. Do not force switched or external connections in any way. They should all connect easily, without needing to be forced.
8. Always operate the unit with the AC ground wire connected to the electrical system ground. Precautions should be taken so that the means of grounding of a piece of equipment is not defeated.
9. AC voltage must be correct and the same as that printed on the rear of the unit. Damage caused by connection to improper AC voltage is not covered by any warranty.
10. Turn power off and disconnect unit from AC current before making connections.
11. Never hold a power switch in the “ON” position.
12. This unit should be installed in a cool dry place, away from sources of excessive heat, vibration, dust, moisture and cold. Do not use the unit near stoves, heat registers, radiators, or other heat producing devices.
13. Do not block fan intake or exhaust ports. Do not operate equipment on a surface or in an environment which may impede the normal flow of air around the unit, such as a bed, rug, carpet, or completely enclosed rack. If the unit is used in an extremely dusty or smoky environment, the unit should be periodically “blown free” of foreign dust and matter.
14. To reduce the risk of electric shock, do not remove the cover. There are no user serviceable parts inside. Refer all servicing to qualified service personnel. There are no user serviceable parts inside.
15. When moving the unit, disconnect input ports first, then remove the power cable; finally, disconnect the interconnecting cables to other devices.
16. Do not drive the inputs with a signal level greater than that required to drive equipment to full output.
17. The equipment power cord should be unplugged from the outlet when left unused for a long period of time.
18. Save the carton and packing material even if the equipment has arrived in good condition. Should you ever need to ship the unit, use only the original factory packing.
19. Service Information Equipment should be serviced by qualifier service personnel when:
    A. The power supply cord or the plug has been damaged.
    B. Objects have fallen, or liquid has been spilled into the equipment.
    C. The equipment has been exposed to rain
    D. The equipment does not appear to operate normally, or exhibits a marked change in performance
    E. The equipment has been dropped, or the enclosure damaged.

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INTRODUCTION

Congratulations on your purchase Today one of the most innovative VGA(RGBHV)/Stereo Audio(AR/AL) 8x8 matrix switching products on the market Today. The SB-8188LCM is a true Matrix Routing Switcher for VGA(RGBHV)/Stereo Audio(AR/AL) signals. It has an 8 individual VGA(RGBHV)/Stereo Audio(AR/AL) inputs with 8 individual VGA(RGBHV) /Stereo Audio(AR/AL) outputs. Because it is a matrix router, any input may be routed to any output; or the same input may be routed to all outputs or any combination. It completely eliminates the need to constantly move around audio and video input cables and output via VGA(RGBHV) cables. The SB-8188LCM is useful for Matrix signals from VGA source devices (such as: Personal computer, Set Top Box, and Satellite Receivers, etc.) To VGA destination devices over VGA cables to (Such as LCD Monitors, VGA Monitors, Plasma LCD TV, VGA Projectors, etc.). Selection of inputs is made via the front panel push buttons or an Infrared Remote Control unit or RS-232 control by a computer.

PACKAGE CONTENTS

Check that you have the following components;

- SB-8188LCM Matrix Routing Switcher
- IR Remote Control
- IR Extender receiver (SB-100)
- Rack Mounts
- RS-232 Cable
- RS-232 driver CD (All Windows Operating Systems)
- Users Guide
- AC/DC Adapter: 12VDC, 2A Universal Type 50/60Hz, 100~230 VAC

SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply. Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

DISCLAIMERS

The information in this manual has been carefully checked and is believed to be accurate. We assume no responsibility for any infringements of patents or other rights of third parties which may result from its use.

We assume no responsibility for any inaccuracies that may be contained in this document. We make no commitment to update or to keep current the information contained in this document.

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FEATURES & SPECIFICATIONS

FEATURES

- Supports 8x inputs VGA+Stereo Audio to 8x VGA+Stereo Audio outputs Matrix Switcher
- 8x Input signals support via VGA (RGBHV), Stereo Audio(AR/AL)
- 8x Output Signals support via VGA (RGBHV), Stereo Audio(AR/AL) to VGA Monitor displays
- Higher Video Bandwidth 450MB each path R,G,B signals.
- Supported HD high definition resolutions XGA, SXGA, UXGA, WSXGA, WUXGA
- RS-232 Serial interface via @ethernet control is optional
- Compatible with all VGA Video Monitor devices, Plasma display and Projectors
- Supported RS-232 serial interface protocol commands list
- Control PC RS-232 Drive compatible with win-95/98/2000/xp
- Various User Interface controls:
    - Attached Window based control software for Desktop or NB control by RS-232 port
    - Manual controlled by Front Panel button
    - IR remote control
- Supports desktop with Ear mount and 19 inch Rack mountable type panel
- Power supply DC12Volt, Universal Type Switch 100~230VAC, 50/60Hz

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SPECIFICATIONS

Type of Switcher: 8 in To 8 out, VGA (RGBHV)-Audio Matrix Switcher
Input Ports: Group:

- 1x VGA (RGBHV) via 1x HD-15p VGA Female connector
- 1x Stereo Audio (AR/AL), Via 1x ⌀3.5mm Ear Phone Female Jack

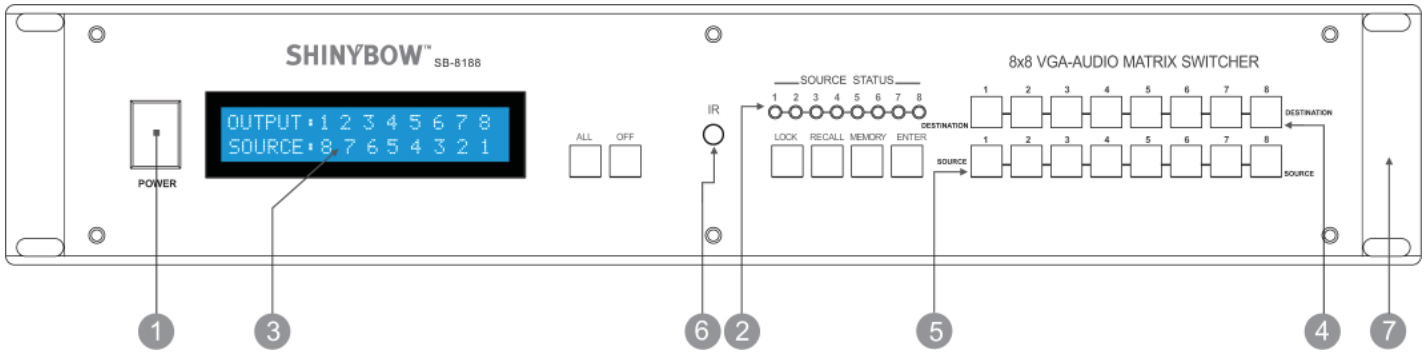
Output Ports: Group:

- 1x VGA (RGBHV) via 1x HD-15p VGA Female connector
- 1x Stereo Audio (AR/AL), Via 1x ⌀3.5mm Ear Phone Female Jack

Video Bandwidth: 2450MHz (-3db), 200mVp-p
Video Supported: Higher resolution formats HD 1920x1200 (WUXGA)
Audio Supported: Stereo Audio
Low All Hostile Crosstalk: -83 db@5MHz
Controls: IR remote, Select buttons on the front panel & RS-232
PC RS-232 Control : RS-232 interface serial via DRV on a PC
Gain Control: 60MHz 0.1 db gain flatness
Chassis Material: Metal thin=1mm
Safety Approvals: CE, FCC, VCCI, REACH, Erp, WEEE
Dimensions (LxWxH): 19 x 7.87 x 3.46 in (482x200x88mm)
Power Supply: DC12V / 2A (consumption 1.6A Max) Use Universal Switch Type 50/60Hz,100~230 VAC
Shipping Weight: 3.55 Kgs / 5.85 lb

As product improvements are continuous, specifications are subject to change without notice.

FRONT PANEL



1. POWER SWITCH

The power switch turns the unit on and off. The LED will illuminate red to indicate that the switcher is ON and is receiving power.
The Switcher will remember that last state during a power cycle.
When power is removed and resorted, the last configuration will be evoked.

2. INPUT STATUS DISPLAY

Input sources 1 to 8 LED illuminates blue to indicate that a video source is present on that input.

3. OUTPUT STATUS DISPLAY

Each Output (destination) Channel shows which input (source) is assigned.

4. DESTINATION SELECT BUTTONS

Separate outputs 1 thru 8 select buttons are provided for each destination assignment.
Routing can be Source to Destination or one source to multiple destinations.
Example : Press Destination 1,3,5 then press Source 2 will route Input 2 to Output 1,3,5 respectfully.

5. SOURCE SELECT BUTTONS

Separate inputs 1 thru 8 select buttons are provided each source selection.

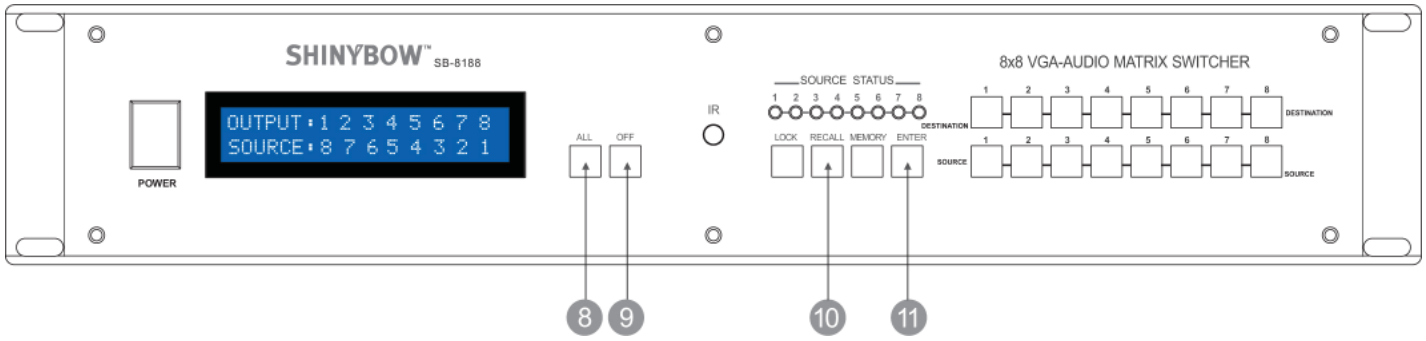
6. IR SENSOR

The IR sensor receives IR commands from the supplied remote controller or third party IR emitter.

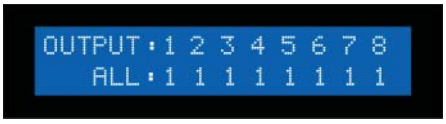
7. 19 INCH EAR MOUNT PAIR

Converts desktop to 19 inch rack mount. Bracket (part # 2U-440L) INCLUDED.
Image shows rack mount bracket attached.

FRONT PANEL



8. FUNCTION KEY - ALL



Disables (mute) video on all destinations OR Selects the same source to all destinations.

Option 1

- Press **ALL** followed by **OFF** button. The display will show " 0 " indicating all destinations have no video selected.

Option 2

- Press **ALL** followed by Source 1 thru 8. The display will show the Source selected.
- Press **ENTER** The pre-set source selection will be assigned all destinations.

9. FUNCTION KEY - OFF

Disables (mute) video to selected channels. Either destinations.

- Press **OFF** button followed by any Destination channel.
- Press 1 thru 8 output destination. The display will show " 0 " for the selected channel indicating no video selected.

10. FUNCTION KEY - RECALL

The system will show previously stored presets, up to a total of 16.
Presets are stored in local memory using Source keys 1 thru 8 or Destination keys 1 thru 8 as the memory preset location.

- press **RECALL** button.
- press 1 thru 8 on either Source or Destination row.
- press **ENTER** The pre-set configuration will execute.

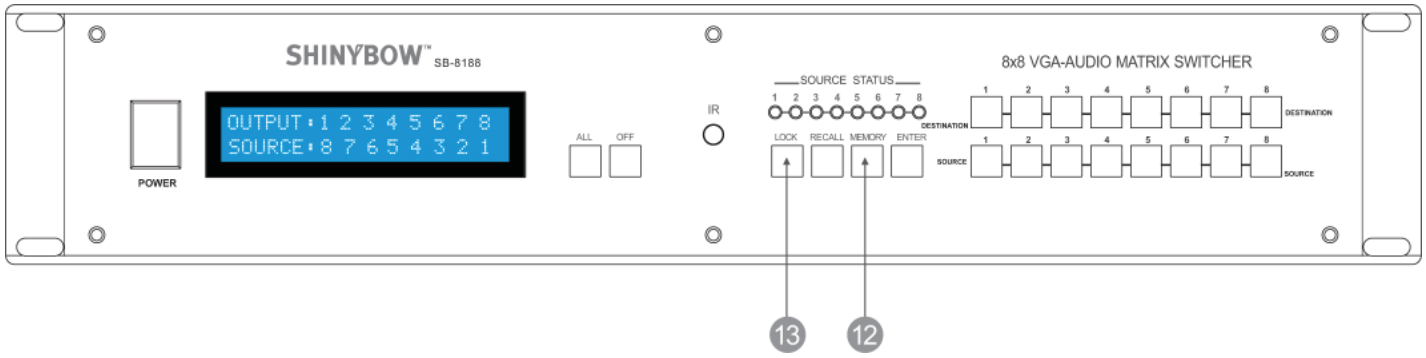
Operation completes.

Note: Operation will abort if no keys are dressed within 5 seconds.

11. FUNCTION KEY - ENTER

Press **ENTER** to confirm entries.

FRONT PANEL



12. FUNCTION KEY - MEMORY

The system will show stored presets, up to a total of 16.
Presets are stored in local memory using Source keys 1 thru 8 or Destination keys 1 thru 8 as the memory preset location.

- Configure desired matrices..
- Press **MEMORY** button.
- Press 1 thru 8 on either Source or Destination row.
- Press **ENTER** to ready memory location.
- or press **MEMORY** again to cancel operation.

Operation completes.

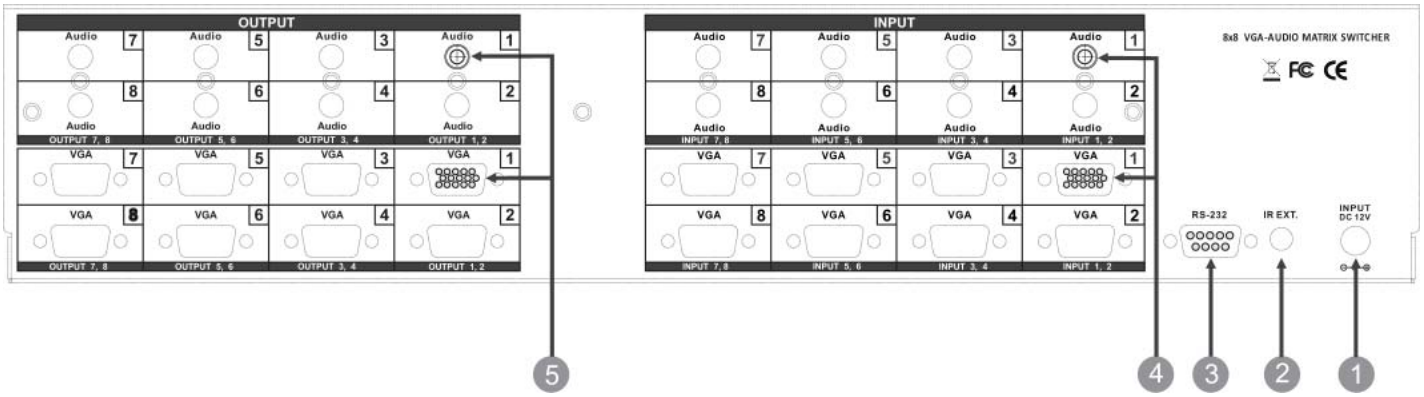
Note : Operation will abort if no keys are pressed within 5 seconds.

13. FUNCTION KEY - LOCK

- Press and hold **LOCK** button for two seconds lockout the front panel.
- Press and hold **LOCK** button for two seconds to enable the front panel.

REAR PANEL

REAR PANEL



1. DC POWER INLET

The switcher is fitted with a DC power plug-park input connector. Please ensure that the plug-park used is of an approved type and is of sufficient current carrying capacity with the correct voltage and connector polarity. 12Volt DC power supply 2A Max.

Power Jack:
DC Jack - Inner OD ⌀ 2.1mm (+)
Outside OD ⌀ 5.5mm (GND)
Power input - 12VDC, 2A
Switcher power suppler use universal
Part number : TA 007

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2. IR EXTERNAL IN (EXT. IR TO CONTROL SWITCHER)

Support one of IR Extender to control Switcher Extend distance maximum 300 Meters / ~1000 feet When you plug the External IR extender into the switcher, the front panel IR receiver remain active.

IR Extender Jack:
Female Jack - inner OD ⌀ 3.5 mm

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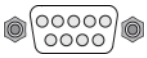
3. RS-232 CONNECTION

RS-232 control port to allow for interfacing to a PC, Such as a computer or touch panel control, to the switcher via this DB-9pin Female connector for serial RS-232 control.



Remote port :
DB-9pin Female connector

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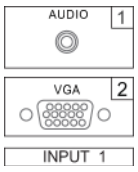
4. INPUTS - 1~8 VGA-RGBHV-AUDIO PORTS

Connect a signal 8x sources of VGA (RGBHV) & Stereo Audio player device to 8x VGA/Audio outputs matrix switcher.



VGA (RGBHV) Via 1x HD-15p connector
Stereo Audio(AR/AL) Via 1x ⌀3.5mm
Ear phone jack connector
Note: VGA input : With 1x HD-15F female connector. Audio input : With 1x Stereo Ear phone Jack

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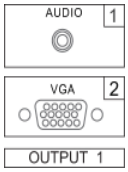
5. OUTPUTS - 1~8 VGA-RGBHV-AUDIO PORTS

Connect 8x VGA(RGBHV) & Stereo Audio via 8x VGA cable to VGA Monitor displays and Audio speaker devices.



VGA (RGBHV) Via 1x HD-15p connector
Stereo Audio(AR/AL) Via 1x ⌀3.5mm
Ear phone jack connector
Note: VGA input : With 1x HD-15F female connector. Audio input : With 1x Stereo Ear phone Jack

REMOTE CONTROL

Before making any connections to the switcher. Observe the following:

Ensure the mains voltage supply matches the label on the supplied plug- Pack (+/- 10%)

Ensure that the power switch is OFF

Ensure that all system grounds (earth) are connected to a common point.

Avoid powering equipment within a system from multiple power sources that may be separated by large distances

Connect all audio video sources and destination equipment

Power up all source and destination audio-visual sources

For each destination output select the appropriate input source by using the front panel input 1~8 select buttons. the supplied IR remote control. Or through the RS-232 serial communication port.

Upon power up the switcher will return to its last used setting before Powered down.

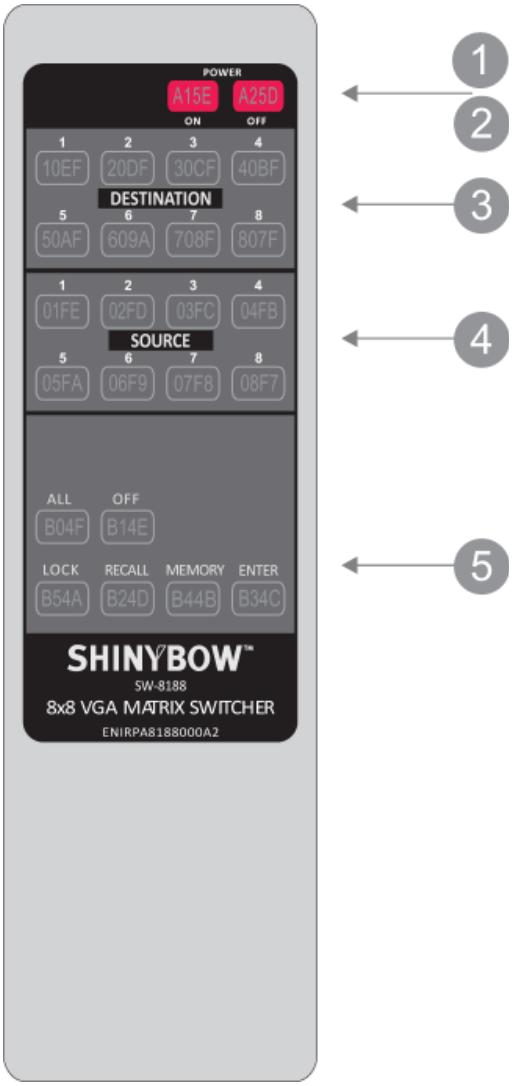
REMOTE CONTROL

1. & 2. SWITCH POWER ON or OFF:
Controller with a power ON and OFF

3. DESTINATION : 1 thru 8 OUTPUT SELECTION:
Press the destination button to select the output display channel.

4. SOURCE : 1 thru 8 INPUT SOURCE SELECTION:
Press input 1~8 sources with selection button.

5. FUNCTION KEY:
ALL - function selection button
OFF - function selection button
RECALL - function selection button
ENTER - function selection button
MEMORY - function selection button
LOCK - function selection button



REMOTE PROTOCOL COMMANDS

IR REMOTE CUSTOM AND DATA CODES (NEC STANDARD)

HOW TO SETUP IR CODES :

CUSTOM CODE : 35CA

POWER ON:	35CA	A15E
POWER OFF:	35CA	A25D
ALL:	35CA	B04F
OFF:	35CA	B14E
LOCK:	35CA	B54A
RECALL:	35CA	B24D
ENTER:	35CA	B34C
MEMORY:	35CA	B44B

PRESS DESTINATION - # then PRESS SOURCE - #

DESTINATION #1 :	35CA	10EF	SOURCE #1 :	35CA	01FE
DESTINATION #2 :	35CA	20DF	SOURCE #2 :	35CA	02FD
DESTINATION #3 :	35CA	30CF	SOURCE #3 :	35CA	03FC
DESTINATION #4 :	35CA	40BF	SOURCE #4 :	35CA	04FB
DESTINATION #5 :	35CA	50AF	SOURCE #5 :	35CA	05FA
DESTINATION #6 :	35CA	609F	SOURCE #6 :	35CA	06F9
DESTINATION #7 :	35CA	708F	SOURCE #7 :	35CA	07F8
DESTINATION #8 :	35CA	807F	SOURCE #8 :	35CA	08F7

For example;

Select Destination # 1 to show Source #1~8,

The IR Data Code list when press Destination # then press Source #

Press Destination # 1 & Source #1	35CA	10EF	35CA	01FE
Press Destination # 1 & Source #2	35CA	20DF	35CA	02FD
Press Destination # 1 & Source #3	35CA	30CF	35CA	03FC
Press Destination # 1 & Source #4	35CA	40BF	35CA	04FB
Press Destination # 1 & Source #5	35CA	50AF	35CA	05FA
Press Destination # 1 & Source #6	35CA	609F	35CA	06F9
Press Destination # 1 & Source #7	35CA	708F	35CA	07F8
Press Destination # 1 & Source #8	35CA	807F	35CA	08F7

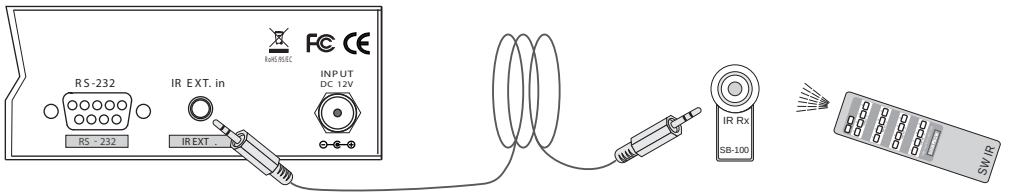
IR EXTENDER

IR RECEIVER:

1. SB-100 IR 300M Receiver

Device Cable (3C) IR Receiver (SB-100)

SB-100 IR Receiver Set



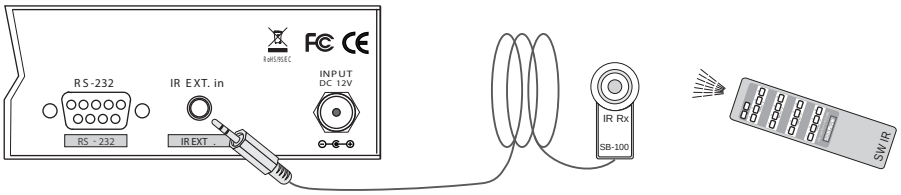
SB-100 Maximum Distance ~ 984 feet (300 meters)

2. SB-100C IR 2M Receiver

Device Cable (3C) IR Receiver (SB-100C)

IR Receiver cable 6ft (2M)

SB-100C IR Receiver Cable



SB-100C Maximum Distance ~ 6 feet (2 meters)

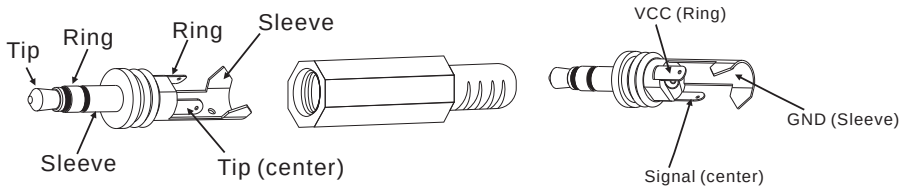
**** When you plug the External IR extender into the switcher, the front panel IR receiver remains active. ****

PIN CONFIGURATION:

SB-100 and SB-100C Receiver Pin configuration

SB-100 IR Receiver Set

Tip: Signal
Ring :VCC
Sleeve: GND

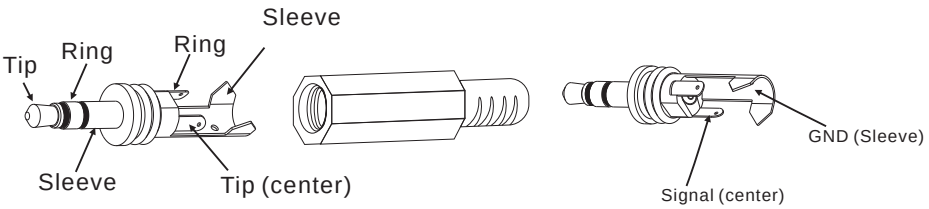


SB-100 Maximum Distance ~ 984 feet (300 meters)

IR Receiver cable 6ft (2M)

SB-100C IR Receiver Cable

Tip: Signal
Ring: NC
Sleeve: GND



SB-100C Maximum Distance ~ 6 feet (2 meters)

Note: *The External IR jack has voltage on the "Ring" portion of a 3-conductor plug. You must use a 3-conductor plug (aka: stereo plug). Using a 2-conductor plug will short out the power supply. Always make connections with the switcher power off.*

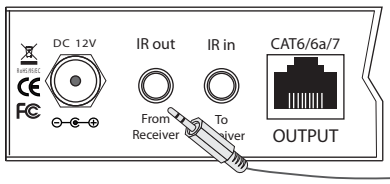
IR EXTENDER

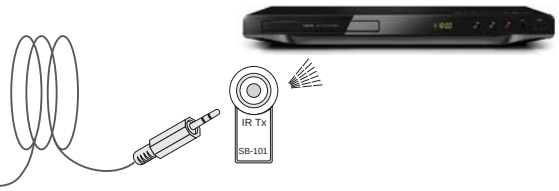
IR EMITTER:

1. SB-101 IR 300M Transmitter

Device Cable (3C) IR Transmitter (SB-101)

SB-101 IR Transmitter Set





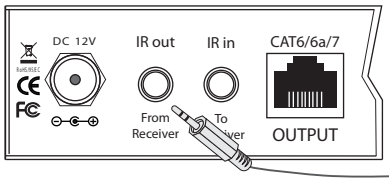
SB-101 Maximum Distance ~ 984 feet (300 meters)

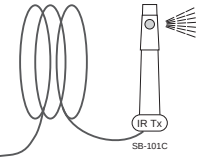
2. SB-101C IR 2M Transmitter

Device Cable (3C) IR Transmitter (SB-101C)

IR Transmitter cable 6ft (2M)

SB-101C Transmitter Cable





SB-101C Maximum Distance ~ 6 feet (2 meters)

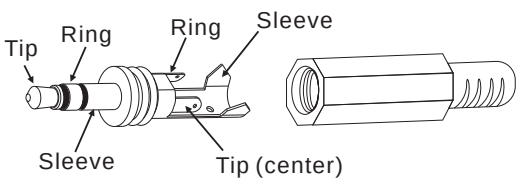
**** When you plug the External IR extender into the switcher, the front panel IR transmitter remains active. ****

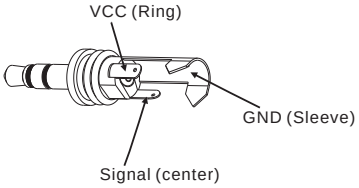
PIN CONFIGURATION:

SB-101 and SB-101C Transmitter Pin configuration

SB-101 IR Transmitter Set

Tip: Signal
Ring :VCC
Sleeve: GND



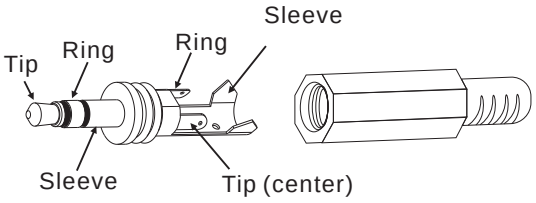


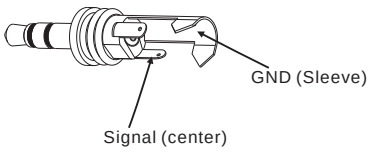
SB-101 Maximum Distance ~ 984 feet (300 meters)

IR Transmitter cable 6ft (2M)

SB-101C Transmitter Cable

Tip: Signal
Ring: NC
Sleeve: GND





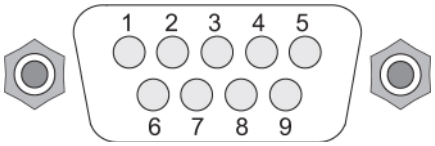
SB-101C Maximum Distance ~ 6 feet (2 meters)

Note: *The External IR jack has voltage on the "Ring" portion of a 3-conductor plug. You must use a 3-conductor plug (aka: stereo plug). Using a 2-conductor plug will short out the power supply. Always make connections with the switcher power off.*

RS-232 SERIAL INTERFACE

RS-232 SERIAL INTERFACE CONNECT A PC OR CONTROL SYSTEM. VERSION COMPATIBLE V2.0

For a complete list of commands, please reference external document extended RS-232 Protocol Instruction Manual.



Pin	RS-232	Definition
1	------	Not used
2	TX	Transmitter
3	RX	Receiver
4	------	Not used
5	GND	Ground
6	------	Not used
7	------	Not used
8	------	Not used
9	------	Not used

RS-232 PROTOCOL COMMANDS (RS-232 CONTROL DRIVER V2.0.1)

The ShinybowUSA switcher can be controlled via the RS-232 serial control port to allow for interfacing to a PC, or similar third party control system.

The serial communication parameters are 9600 baud, 8 bit, No Parity and 1 stop bit - this is often referred to as 9600 8N1.
When the unit recognizes a complete command it will perform the requested action - there is no delimiter character required.

TYPICAL APPLICATION

INSTALLING DIAGRAM

8X8 VGA-AUDIO MATRIX SWITCHER

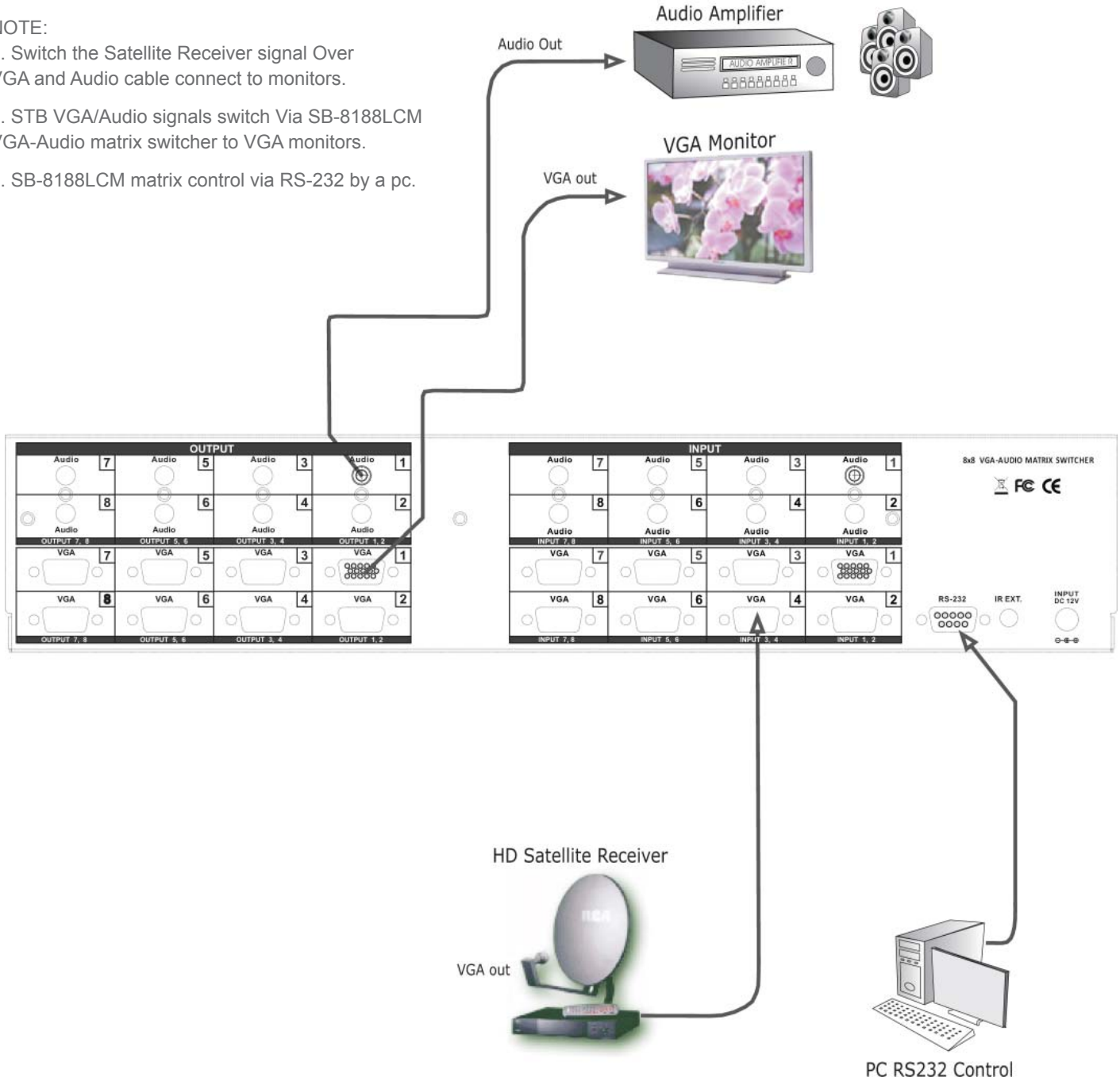
Sample connection using 8x8 VGA-AUDIO Matrix Switcher Switch signals to VGA-Audio Monitor Displays via VGA & Audio cable with SB-8188LCM and Audio Amplifier to speakers and signals from Satellite Receiver.

NOTE:

1. Switch the Satellite Receiver signal Over VGA and Audio cable connect to monitors.

2. STB VGA/Audio signals switch Via SB-8188LCM VGA-Audio matrix switcher to VGA monitors.

3. SB-8188LCM matrix control via RS-232 by a pc.



Support switch by SB-8188LCM output VGA and Stereo Audio via VGA and Stereo Audio cable

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